Atty. Dkt. No.: PAT051746-US-PCT

2300-51746

## I. AMENDMENT

## Amendments to the Claims:

The following listing reflects the currently pending claims. No amendments are made herein.

- 1. (Previously presented) A liquid combination vaccine comprising antigens for protecting a subject against at least diphtheria ('D'), tetanus ('T'), pertussis ('P') and *Haemophilus influenzae* type b ('Hib'), wherein: (a) the antigen for protecting against Hib is a conjugate of a Hib capsular saccharide; (b) the concentration of the Hib conjugate in the vaccine is <15 μg/ml; (c) the vaccine comprises an aluminium phosphate adjuvant; (d) no more than 15% by weight of the Hib conjugate in the vaccine is adsorbed to aluminium phosphate; (e) the vaccine does not contain an aluminium hydroxide adjuvant; and (f) the vaccine does not contain an aluminium potassium sulphate adjuvant.
- 2. (Previously presented) A vial having a piercable seal and containing a liquid combination vaccine, which combination vaccine comprises antigens for protecting a subject against at least diphtheria, tetanus, pertussis and *H. influenzae* type b ('Hib'), wherein the antigen for protecting against Hib is a conjugate of a Hib capsular saccharide, and wherein: (a) the concentration of the Hib conjugate in the vaccine is <15 μg/ml, (b) the vial's piercable seal has not been pierced; (c) the vaccine comprises an aluminium phosphate adjuvant; (d) no more than 15% by weight of the Hib conjugate in the vaccine is adsorbed to aluminium phosphate; (e) the vaccine does not contain an aluminium hydroxide adjuvant; and (f) the vaccine does not contain an aluminium potassium sulphate adjuvant.
- 3. (Previously presented) A hermetically-sealed container containing a liquid combination vaccine comprising antigens for protecting a subject against at least diphtheria, tetanus, pertussis and *H. influenzae* type b ('Hib'), wherein (a) the antigen for protecting against Hib is a conjugate of a Hib capsular saccharide; (b) the concentration of the Hib conjugate in the vaccine is <15 µg/ml; (c) the vaccine comprises an aluminium phosphate adjuvant; (d) no more than 15% by weight of the Hib conjugate in the vaccine

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is adsorbed to aluminium phosphate; (e) the vaccine does not contain an aluminium hydroxide adjuvant; and (f) the vaccine does not contain an aluminium potassium sulphate adjuvant.

4. (Previously presented) A process for preparing a liquid combination vaccine comprising antigens for protecting a subject against at least diphtheria, tetanus, pertussis and *H. influenzae* type b ('Hib'), wherein (a) the antigen for protecting against Hib is a conjugate of a Hib capsular saccharide; (b) the concentration of Hib conjugate in the vaccine is <15 μg/ml; (c) the vaccine comprises an aluminium phosphate adjuvant; (d) no more than 15% by weight of the Hib conjugate in the vaccine is adsorbed to aluminium phosphate; (e) the vaccine does not contain an aluminium hydroxide adjuvant; and (f) the vaccine does not contain an aluminium sulphate adjuvant,

characterised in that the process does not include one or both of the following steps: (i) a step of lyophilisation of the Hib conjugate antigen; (ii) a step of packaging the diphtheria, tetanus and pertussis antigens in admixed form separately from the Hib conjugate antigen.

- 5. (Previously presented) A process for inserting a liquid combination vaccine into a container, wherein: (a) the vaccine that comprises antigens for protecting a subject against at least diphtheria, tetanus, pertussis and *H. influenzae* type b ('Hib'); (b) the antigen for protecting against Hib is a conjugate of a Hib capsular saccharide; (c) the concentration of the Hib conjugate in the vaccine is <15 μg/ml; (d) the vaccine comprises an aluminium phosphate adjuvant; (e) no more than 15% by weight of the Hib conjugate in the vaccine is adsorbed to aluminium phosphate; (f) the vaccine does not contain an aluminium hydroxide adjuvant; and (g) the vaccine does not contain an aluminium potassium sulphate adjuvant.
- 6. (Previously presented) A process for attaching a label to a container, wherein:
  (a) the container contains a liquid combination vaccine that comprises antigens for protecting a subject against at least diphtheria, tetanus, pertussis and *H. influenzae* type b ('Hib'); (b) the antigen for protecting against Hib is a conjugate of a Hib capsular

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saccharide; (c) the concentration of the Hib conjugate in the vaccine is <15  $\mu$ g/ml; (d) the vaccine comprises an aluminium phosphate adjuvant; (e) no more than 15% by weight of the Hib conjugate in the vaccine is adsorbed to aluminium phosphate; (f) the vaccine does not contain an aluminium hydroxide adjuvant; and (g) the vaccine does not contain an aluminium potassium sulphate adjuvant; and (h) the process comprises a step of attaching a label to a container.

7. (Previously presented) A process for inserting a combination liquid vaccine into a container and then extracting the vaccine from the container, wherein: (a) the vaccine comprises antigens for protecting a subject against at least diphtheria, tetanus, pertussis and *H. influenzae* type b ('Hib'); (b) the antigen for protecting against Hib is a conjugate of a Hib capsular saccharide; (c) the concentration of the Hib conjugate in the vaccine is <15 μg/ml; (d) the vaccine comprises an aluminium phosphate adjuvant; (e) no more than 15% by weight of the Hib conjugate in the vaccine is adsorbed to aluminium phosphate; (f) the vaccine does not contain an aluminium hydroxide adjuvant; and (g) the vaccine does not contain an aluminium sulphate adjuvant.

## 8-10. (Canceled)

- 11. (Original) The vaccine, vial, container or process of any preceding claim, where the diphtheria antigen comprises a diphtheria toxoid, the tetanus antigen comprises a tetanus toxoid, and the pertussis antigen comprises a cellular pertussis component.
- 12. (Original) The vaccine, vial, container or process of any preceding claim, where the conjugate comprises a CRM<sub>197</sub> carrier, a tetanus toxoid carrier or an outer membrane complex of *N. meningitidis* carrier.
- 13. (Original) The vaccine, vial, container or process of any preceding claim, where the conjugate comprises an oligosaccharide fragment of the Hib polyribosylribitol phosphate.

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14. (Canceled)

15. (Canceled)

- 16. (Withdrawn) A method for raising an antibody response in a mammal, comprising administering the vaccine of any preceding claim to the mammal.
- 17. (Previously presented) The vaccine, vial, container or process of any preceding claim, wherein at most 5% of the Hib conjugate in the vaccine is adsorbed to aluminium phosphate.
- 18. (Previously presented) The vaccine of claim 17, wherein at most 1% of the Hib conjugate in the vaccine is adsorbed to aluminium phosphate.
- 19. (Previously presented) The vaccine of claim 11, wherein the diphtheria toxoid and the tetanus toxoid are adsorbed onto aluminium phosphate.
- 20. (Previously presented) The vaccine, vial, container or process of any preceding claim, wherein the conjugate has a saccharide:protein ratio (w/w) of between 1:5 and 5:1.
- 21. (Withdrawn) The method of claim 16, wherein administration of the vaccine results in an anti-PRP antibody concentration of  $\geq 0.15 \, \mu \text{g/ml}$ .